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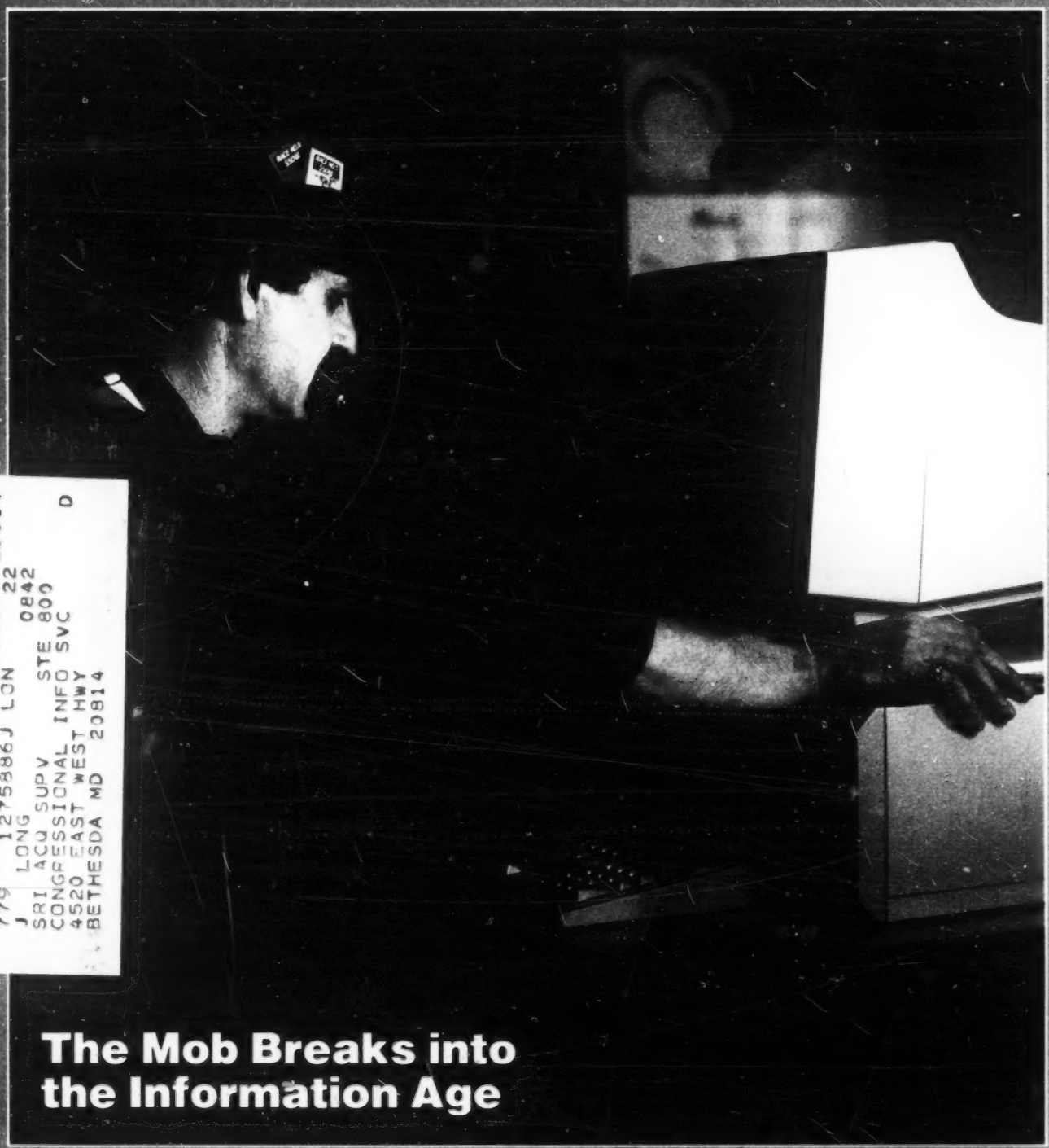
7th Semiannual Microcomputer Software Review

3rd Annual Datacomm Usage Survey • DBMS: A Continuous Evolution

Managing Change in Micro Technology



The Mob Breaks into the Information Age

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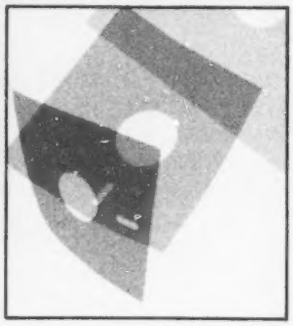

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3rd Annual Datacomm Usage Survey

In Search of Datacomm Expertise

Lack of trained staff, varied equipment choices, and the 'vendor gap' pose management problems as firms grow into data communications.

By Chuck Cozette
Associate Editor
and Ray Winkler
Manager,
Market Research

The increasing importance of data communications is forcing a fundamental restructuring in management information systems (MIS)—and raising a desperate cry for datacomm expertise.

As business priorities continue to require greater computer connectivity, datacomm is gradually attaining a peer relationship with its older, more established sibling, data processing (DP). As a result, information systems is becoming a two-pronged effort. In larger companies, increasingly this means separate managers for each function and a senior executive overseeing the entire MIS operation. In smaller firms unable to afford the luxury of additional management, many DP managers still do double-duty.

These observations are based on INFOSYSTEMS' third annual Datacomm Usage Survey. The study, conducted in January by Hitchcock Research Services of Wheaton, IL, was mailed to 4,000 MIS management-related individuals within a broad cross-section of industries across the country. Replies were received from 1,071 recipients for a return rate of 27 percent.

Although only 13 percent of all companies responding to the survey have separate datacomm managers, that number rises to 24 percent among companies with 1,000 or more employees. In the heavily communications-dependent banking and transporation industries, about 30 percent of those surveyed have datacomm managers.

In companies with datacomm managers, more than half report to an MIS executive, according to the study. In companies with more than 500 employees and no separate datacomm expert, the MIS manager assumes direct datacomm control 40 percent of the time. In businesses with 500 or fewer employees, however, datacomm responsibility is handled by the DP manager in about 45 percent of the firms surveyed.

Judging by respondent comments, some of these dual DP/datacomm managers are drowning under the complexities of their combined responsibilities. "Currently, we are understaffed so that all communications (voice/data), along with any computer-related problems, are handled by me," comments one respondent. "These areas need more people to dedicate themselves totally to either computers or communications. In short, we need to develop a separate communications department to devote the needed time towards making things work properly."

Regardless of how responsibilities are delegated, datacomm expertise is at a premium. Lack of trained staff and/or technical knowledge were among the most oft-cited problems of those surveyed. Summarizes another respondent, "This is a new area for us, and we are having to learn the hard way how to do things."

Users claim they are not the only ones in need of datacomm know-how. Many of those surveyed pointed an accusatory finger at vendors as well. "Most vendor representatives do not know how to reasonably communicate or actually integrate their products into a communications network," claims one user. Adds another, "No one understands fully the big picture, only their individual part."

Even more scarce than a vendor with datacomm knowledge is one who is willing to take blame when a system has problems, according to survey comments. Users long for a few dependable

Types of Data Communications Systems Being Used

	Presently Have		Don't Have Now But Plan to Add In Next 12 Months		Total that Have or Plan to Add In Next 12 Months	
	No.	Percent	No.	Percent	No.	Percent
Local Systems (on-site, campus)	862	81%	65	6%	927	87%
Metropolitan Area Systems	311	29%	77	7%	388	36%
Long Distance Systems	605	57%	98	9%	703	66%
Total-One or More Systems	1,030	96%	196	18%	1,056	99%
Total Respondents	1,071	100%	1,071	100%	1,071	100%

suppliers that will subscribe to Harry Truman's "the buck stops here" philosophy of problem-solving. "There are too many manufacturers," complains one respondent. "It's hard to tell which equipment will best serve our needs based on claims that sometimes are not entirely true."

Compatibility is another issue that continues to raise the hackles of many users. Cutting to the heart of the problem, one individual points to the "vendor gap between what is technically feasible and what it really takes to get things working reliably."

Although many of these complaints are similar to those voiced in the survey a year ago, there is one notable difference. Last year, AT&T took the brunt of the criticism for problems throughout the communications sector. This year, complaints were far more generic and the telecomm giant was seldom singled out as a particular source of difficulty.

Despite the negative tenor of their comments, many survey respondents still plan to expand datacomm facilities. These plans appear to be tempered, however, by residual effects of the general computer slump of the past 18 months.

Local systems remain the highest priority, with 43 percent planning on expanding either "moderately" or "substantially," according to the study. This is down from the 53 percent that planned similar expansion last year. One third of those surveyed expect growth in long distance systems, but that number is down 20 percent from a year ago. Metropolitan area systems are expected to suffer the greatest growth stagnation, as only 19 percent of respondents plan to expand in this area, compared to 52 percent in 1985.

The concept of integrating voice and data communications continues to generate a significant amount of interest but few tangible results. For the second consecutive year, almost a third of those surveyed plan moderate to extensive voice/data integration activity. But the percentage of companies with existing voice/data systems remained a paltry two percent. The insurance industry is an exception, however, with almost eight percent reporting integrated systems in place.

The survey also indicates a reduction in the planned purchase of individual products and services. Of the 17 products and services listed, only two show signs of measurably higher growth than last year—local area networks (LANs) and network management systems. Thirty-five percent of survey respondents plan to add LANs in the next 12 months and 21 percent expect to implement network management systems, both up four percent from last year.

That is not to say other products will not be purchased in significant numbers. Micro-to-mainframe links, for example, still top the list of planned purchases for the next 12 months. Forty-three percent of those surveyed say they will buy such links. But this anticipated growth is down 12 percent from last year, exactly reflecting the percentage increase in the

Products and Services

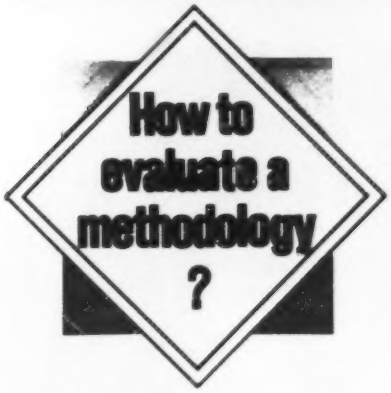
	Presently Use	Plan to Add in Next 12 Months
Terminals	92%	30%
Modems	92%	30%
Printers	92%	26%
Microcomputers	82%	27%
Communications software	72%	23%
Micro-to-mainframe links	56%	43%
Private line	52%	16%
Communications processors	49%	16%
Multiplexors	49%	20%
PBX's: Voice	45%	7%
Carriers (common value-added packet switching)	45%	14%
Converters (protocol interface, etc.)	43%	21%
Diagnostic and test equipment	31%	16%
Local area networks	30%	35%
Network management systems	22%	21%
PBX's: Voice and data	15%	19%
PBX's: Data	13%	10%
Base	1,028	544
	100%	100%

Number of Respondents by Job Title

	No. of Respondents	Percent
DP/MIS Operations		
DP/MIS Management	726	68%
DP/MIS Supervisory	85	8%
DP/MIS Staff	53	5%
Sub-Total	864	81%
Company Management		
General and Corporate Mgmt.	76	7%
Financial Management	58	5%
Administrative Services Mgmt.	62	6%
All Other	11	1%
Sub-Total	207	19%
Total Respondents	1,071	100%

Expansion Plans by Present Users (Next 12 Months)

	Local Systems	Metropolitan Area Systems	Long Distance Systems
Base: Presently Have System	1,030 100%	331 100%	605 100%
Will expand moderately	34%	15%	26%
Will expand substantially	9%	4%	8%
Will change or replace present systems	9%	2%	6%
No changes planned	48%	79%	60%



Are you grappling with high maintenance costs and a long backlog of requests? If the answer is yes, you're probably already investigating some possible solutions.

The articles and books you read may tell you that a systems development methodology can solve your problems, but when it comes to recommending which one, confusion reigns.

How do you evaluate the myriad of methodologies available and select the one that will meet your needs?

"How To Evaluate a Methodology," published by Ken Orr & Associates, Inc., may provide the answer. Based on our current research and more than a decade of experience with systems development, "How To" is a straight-forward set of questions that you need to include in your selection process.

These questions will help you to see the distinctions between methodologies, detect their strengths and weaknessess and, ultimately, discover which one will help you accomplish your goals.

You can get a free copy of "How to Evaluate a Methodology" by calling our toll-free number, 800/255-2459, or sending your business card to: Ken Orr & Associates, Inc., 1725 Gage Blvd., Topeka, KS 66604-3379.

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number of links installed. Forty-four percent of survey respondents had links installed last year; 56 percent, this year.

Three products that appear to be approaching a saturation point are terminals, modems and printers. More than 90 percent of respondents presently use such equipment. As a result, estimates of purchasing for this year, while still strong, are showing signs of leveling off. Microcomputers, in use at 80 percent of the companies surveyed, would appear to be following a similar pattern. Future purchases of these products are likely to depend increasingly on the vendors' ability to provide added value or specific niche functionality.

Who Has Responsibility for Data Communications

Data Processing Manager	40%
Director of Information Systems (MIS)	32%
Data Communications Manager	14%
Other	18%
Base	1,010
	100%

Person to Whom Data Communications Manager Reports

Director of Information Systems (MIS)	55%
Data Processing Manager	19%
Other	27%
Base	141
	100%

Role in the Specification or Purchase of Data Communications Equipment and Services

Advise and consult	68%
Determine the need	72%
Recommend type of equipment or supplier	63%
Specify type of equipment or supplier	56%
Approve the purchase	38%
Not involved	4%
Base	1,058
	100%

Even though MIS managers are the ones who typically oversee the implementation and operation of datacomm equipment, most do not have authority to approve final equipment purchases. MIS has the final say in only 38 percent of the organizations surveyed. The MIS manager does, however, play a strong supporting role: 68 percent serve as an advisor, while 63 percent recommend, and 55 percent specify, the type of equipment or supplier.

A wide spectrum of other individuals and departments have varying degrees of input into purchasing decisions, ranging from the inconsequential to the dictatorial. One respondent claimed his company's president had only a two percent say in the final purchase decision, while another company's executive committee was credited with even less (one percent) input. A number of other firms, however, reported owners, presidents and chief operating officers wielding 100 percent control over datacomm purchasing.

Key factors influencing purchasing decisions have remained virtually the same over the three years of the survey. Maximizing uptime continued to be the highest priority, as users ranked product reliability as the most important single factor in determining a purchase. On a scale of 10, reliability was given a 9.3 rating. Coming in a close second was product performance with a 9.2 score, followed by availability and speed of repair service (8.8), the vendor's reputation for high quality products (8.2), and compatibility with installed systems (8.2). Conspicuous in its absence from the top of this priority list is price, which ranked 10th out of the 12 factors. It was, in fact, the only factor that many respondents didn't rank at all.

The reason that price ranks low among factors affecting a purchase was clearly summed up by one respondent who apparently learned the hard way. "You get what you pay for," the person wrote. "We have on occasion tried to save a few dollars and paid the price in uptime and reliability." (N)

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Complete Datacomm Survey

A complete copy of the INFOSYSTEMS 1986 Datacomm Usage Survey is available for $295. The report includes a detailed breakdown of survey questions by job function, industry and company size. Check or money order must accompany all orders. Mail requests to Datacomm Survey, Research Department, Hitchcock Publishing, 25W550 Geneva Road, Wheaton, IL 60188.